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10/798,595	03/11/2004	Li-Ying Yang	FDN-2795	6367
7590 Attn: William J. Davis, Esq. GAF MATERIALS CORPORATION Legal Department 1361 Alps Road, Building No. 10 Wayne, NJ 07470			EXAMINER	
			KATCHIEVES, BASIL S	
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/798,595

Filing Date: March 11, 2004

Appellant(s): YANG ET AL.

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John F. Kane  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 6/10/09 appealing from the Office action  
mailed 10/10/08.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

4,715,915	Vanderzee	12-1987
4,695,501	Robinson	9-1987
6,544,909	Venkataswamy et al.	4-2003
6,134,856	Khan et al.	10-2000

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 5, 8-12, 14-18, 25, 26, 28, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,134,856 to Khan et al.**

Regarding claims 1, 10 and 11, Khan discloses a roofing membrane (title) having a top and bottom layer (fig. 1: 14 & 16) and a scrim layer (12) made of fiberglass (column 2, lines 17-26), the bottom layer being embossed with alternating ridges and valleys, the layers pressed into one. Regarding the mechanically embossed limitation,

the applicant should note that even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. However, Khan does not particularly disclose the ridges and valleys over the majority of the bottom layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to increase the area of ridges and valleys, since it has been held that a mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. V. Bemis Co.*, 193 USPQ 8. Also, Khan teaches (column 3, lines 40-47) that the width of the ridge and valley section, or selvage edge, may be various sizes and it may also be increased in order to attain greater adhesion. Increasing the size of the selvage edge would have been obvious in order to increase adhesion, which is desirable for a roof membrane.

Regarding claim 5, Khan discloses the embossment pattern as random (fig. 1).

Regarding claims 8, 9 and 25, Khan does not specifically disclose the top and bottom layers as being a polyolefin from polypropylene. However, Khan discloses the layers as optionally being polypropylene (column 2, lines 27-31). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use polypropylene, since it is an option disclosed by Khan and would have been an obvious design choice.

Regarding claim 12, Khan discloses the basic claim structure of the instant application but does not disclose specific dimensions of polyolefin (polypropylene) as stated in the claims. Applicant fails to show criticality for specifically claimed dimensions, therefore it would have been an obvious design choice to use the dimensions such as specified in these claims.

Regarding claims 14 and 15, Khan discloses the basic claim structure of the instant application but does not disclose specific thickness dimensions. Applicant discloses a large range (4 to 200 mils) and fails to show criticality for specifically claimed dimensions, therefore it would have been an obvious design choice to use the dimensions such as specified in these claims.

Regarding claim 16, Khan discloses the basic claim structure of the instant application but does not disclose specific tenacity dimensions. Applicant discloses a large range (100 to 3000) and fails to show criticality for specifically claimed dimensions, therefore it would have been an obvious design choice to use the dimensions such as specified in these claims.

Regarding claim 17, Khan discloses the basic claim structure of the instant application but does not disclose specific tensile strengths. Applicant discloses a large range (at least 80psi) and fails to show criticality for specifically claimed strengths, therefore it would have been an obvious design choice to use the dimensions such as specified in these claims.

Regarding claim 18, Khan discloses the basic claim structure of the instant application but does not disclose specific embossment depths. Applicant discloses a

large range (.01 to 2 mm) and fails to show criticality for specifically claimed depths, therefore it would have been an obvious design choice to use the dimensions such as specified in these claims.

Regarding claim 26, Khan discloses a roofing membrane (title) having a top and bottom layer (fig. 1: 14 & 16) and a scrim layer (12) made of fiberglass (column 2, lines 17-26), the bottom layer being embossed with alternating ridges and valleys, Khan also discloses the making of the ply by applying the top and bottom in molten states (column 1, line 50) and discloses the ridges and valleys as embossed (column 1, lines 51-53) but does not explicitly disclose the embossing by mechanical means. However, Khan suggests mechanical embossing as illustrated in figure 3 as seen by pressing rollers 36, 38 and also rollers not labeled. It would have been obvious to one having ordinary skill in the art at the time the invention was made to mechanically emboss the layers, since it is easier to apply a force to create a desired shape than to chemically create the same shape. However, Khan does not particularly disclose the ridges and valleys over the majority of the bottom layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to increase the area of ridges and valleys, since it has been held that a mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. V. Bemis Co.*, 193 USPQ 8. Also, Khan teaches (column 3, lines 40-47) that the width of the ridge and valley section, or selvage edge, may be various sizes and it may also be increased in order to attain greater adhesion. Increasing the size of the selvage edge would have been obvious in order to increase adhesion.

Regarding claim 28, Khan discloses the polyolefin being polypropylene (column 2, line 28).

Regarding claims 30 and 31, Khan discloses the ply as being capable of rolled (title) and for use on a roof (title). It would have been obvious to one having ordinary skill in the art at the time the invention was made to unroll the rolled roofing material upon a roof and secure it by fasteners to the roof, since that is the only way roofing material may be used upon a roof.

**Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,134,856 to Khan et al. in view of U.S. Patent No. 4,695,501 to Robinson.**

Regarding claim 13, Khan does not disclose the polyolefin as being of the group claimed by the applicant. Robinson discloses an insulative material having polyolefins of various types, one being epoxy polyethylene (column 3, lines 29-48). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Khan by using such a material since it is used as a flexible, insulative sheet.

**Claims 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,134,856 to Khan et al. in view of U.S. Patent No. 4,715,915 to Vanderzee.**

Regarding claim 27, Khan does not disclose the molten ply as being made by extrusion and calendering with the ridges and patterns on a majority of the surface. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to increase the area of ridges and valleys, since it has been held

that a mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. V. Bemis Co.*, 193 USPQ 8. Also, Khan teaches (column 3, lines 40-47) that the width of the ridge and valley section, or selvage edge, may be various sizes and it may also be increased in order to attain greater adhesion. Increasing the size of the selvage edge would have been obvious in order to increase adhesion. Also, Vanderzee discloses a roofing material (column 2, line 23) made by extrusion and calendering (column 3, lines 40-46), this would be an obvious means of making such a material since they are typical in the art of roofing materials and are an efficient means of producing such materials.

Regarding claim 29, Khan discloses the polyolefin as being polypropylene (column 2, line 28), the addition of another layer of polypropylene would have been obvious to one having ordinary skill in the art at the time the invention was made since it has been held that a mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. V. Bemis Co.*, 193 USPQ 8.

#### **(10) Response to Argument**

The applicant's arguments regarding the double patenting rejection are persuasive and the examiner will remove the rejection pending the decision of the Board.

The applicant argues, regarding the Khan reference, that it is not obvious to extend the embossed sections over a majority of the bottom surface. However, the applicant should note that Khan discloses (column 3, lines 43-47) the embossed section

may be of several thicknesses and Khan states that a greater overlap provides greater adhesion. A greater overlap is attained by increasing the area of the embossed ridges and valleys. Increasing the overlap area to a majority, at least 51 percent, would have been an obvious design choice as roofing material are subject to extreme weather conditions such as strong winds and rains and need to be well adhered to the substructure. A greater adhesion would provide a resistance to excessive winds. There are certain areas on the roof of buildings which would be more vulnerable to high winds and having a larger embossed area would provide the user the option of increasing the adhered area which would result in less wind damage. The applicant argues the combination of Khan with Robinson and Vanderzee based upon the shortcomings of Khan. These arguments, regarding Khan, are discussed above.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Basil Katcheves/

Primary Examiner, Art Unit 3635

Conferees:

/Brian E. Glessner/

Primary Examiner, Art Unit 3633

/Richard E. Chilcot, Jr./

Supervisory Patent Examiner, Art Unit 3635